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Building an Agency

To be effective over the long term in carrying out its program and mission, a statistical agency must develop a set of institutional characteristics with the strong support of its department and the Congress. It is particularly important that a statistical agency have a strong measure of professional independence; that it develop a relationship of trust with the individuals and organizations that provide data to the agency; and that it assume a leadership role in its department with regard to data quality standards, statistical methods, and related matters. All three of these institutional characteristics should be supported explicitly in legislation, through firmly established administrative procedures, and through ongoing agency practice. All three characteristics also require that the agency establish itself as a model of excellence. The agency must be held to the highest standards of performance in carrying out its program and mission, particularly its mandate to promote the quality and relevance of the data in its subject area.

We discuss below considerations in maintaining the professional independence of the Bureau of Transportation Statistics (BTS) and in developing a relationship of trust with transportation data providers. (Primary recommendations are at the end of the chapter.) Paramount in maintaining trust are credible pledges that the identity of individual reporting units will be held in confidence. We discuss the problems for BTS that are posed by data programs, such as those in the Office of Airline Information, which were developed for regulatory purposes and operate under provisions that mandate the release of data for individual businesses. Finally, we briefly review the discussion in previous chapters of the leadership role that we believe BTS should play in the statistical activities of the U.S. Department of Transportation (USDOT).

ENSURING INDEPENDENCE

In democracies, government statistical agencies have the role of providing the public and all sides in partisan debates with relevant, timely, and accurate data. Their task is to describe the status of the economy and society and to illuminate problems and the effects of policies but not to articulate solutions or to suggest policies of the government. The data from government statistical agencies must be relevant and credible to all parties in policy discussions.

In order to fulfill this role, long experience has demonstrated that statistical agencies must have a large measure of professional independence from their department and from the administration and the Congress, more broadly. They must adhere closely to their mission to collect high-quality, relevant data in order to meet the information needs of policy makers, planners, and researchers in their subject area and not stray into policy making or political analysis of their own. In turn, they must have authority to make decisions about the best way to carry out their activities so as to ensure the credibility and accuracy of the data they provide and to prevent any possibility of manipulation—or even the appearance of manipulation—of the data to serve particular political or policy purposes.

Policy makers, planners, researchers, and the public must be able to count on having data series that are produced without regard to partisan concerns or the desires of officials to enlist support for specific policies—the data must be factual and tell the story as it is. Of course, no data are without error. The key is to ensure that the data from a statistical agency not be tilted or altered in any manner to serve a particular agenda and that the data are always accompanied by information about quality and limitations.

Avoiding partisan concerns by ensuring independence in professional activities does not mean that a statistical agency should be relegated to a backwater position in its department. On the contrary, it needs to be close to the center of policy decisions if it is to keep the data in its subject area relevant and timely for policy needs and other important public purposes. Ensuring independence while encouraging relevance creates a tension that requires careful structuring of the authority, responsibility, and expectations of those involved. For example, a direct reporting line from the head of the statistical agency to the secretary of the department fosters both independence and policy relevance, so long as that reporting line carries no requirement or expectation that the statistical agency will submit its data releases for prior approval regarding content or date of release. (The secretary of transportation has been scrupulous about respecting BTS's independence in this regard.) It is important that the statistical agency be seen by its department as professionally competent and that the head of the statistical agency provide apolitical advice on the basis of the agency's knowledge of the data it compiles.

Current Protections for BTS Independence

The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) protects the professional independence of BTS in two important ways. First, it establishes BTS as a separate agency within USDOT. Second, it provides for an independent, professionally qualified agency head. Specifically, it stipulates that the BTS director:

- “shall be appointed by the President, with the advice and consent of the Senate . . . from among individuals who are qualified . . . by virtue of their training and experience in the compilation and analysis of transportation statistics”;
- “shall report directly to the Secretary [of Transportation]”; and that
- “the term of the Director shall be 4 years.”

In setting up BTS as a separate modal administration in USDOT, the department carried out the ISTEA mandate for an independent statistical agency in which the director reports directly to the secretary. The department also nominated a highly qualified individual to serve as the first director. In addition, the department has helped to ensure BTS’s professional independence by establishing practices whereby BTS has the authority to select and promote its professional staff and to release statistical information without prior clearance. BTS seeks wide review inside the department of such publications as the *Transportation Statistics Annual Report*. However, the comments it receives are advisory; BTS does not have to accept them nor to hold up publication awaiting them.¹ Finally, the department has supported the analytical programs in which BTS has sought to make clear that it is not engaged in policy analysis of the kind in which particular policy options are developed or recommended. Rather, its analytical work is intended to help policy analysts and other users understand what the data have to say about trends in transportation, including the effects of policies, and the possible implications for future policy making. The current BTS director has established a good record in this regard.

Looking to the Future

We recommend that the formal and informal mechanisms now in place to ensure BTS’s professional independence be strengthened and expanded (see recommendation 9 at the end of the chapter). First, the ISTEA provisions for an independent, qualified director of BTS should be reiterated in the reauthorization of BTS. In addition, the reauthorization should confirm BTS’s existing authority to release statistical information without prior approval by political officials out-

¹The 1991 ISTEA specifies the *Transportation Statistics Annual Report* as a report from the director of BTS to the President and Congress.

side BTS. No problems have arisen in this regard in the past, but BTS is a new agency that has not yet had time to develop all of its mandated functions. As BTS expands its programs and functions (e.g., begins to publish key national indicators), we believe that statutory confirmation of its authority to release statistical information without prior approval is advisable.

We also urge that BTS staffing levels, as well as budget amounts, be approved through the normal budget process, involving discussions between BTS and the department, the U.S. Office of Management and Budget, and, ultimately, the Congress. At present, BTS dollar levels are set in the 1991 ISTEA for the 6-year period of authorization, with yearly review and approval by the department, the Office of Management and Budget, and the Congress. However, BTS staffing levels have, at times, been subject to ad hoc decisions by the secretary to reallocate full-time-equivalent (FTE) positions within the department. Thus, in mid-1996, the Office of the Secretary made a decision to lower the approved FTE ceiling for BTS from 75 to 60 positions through fiscal 1997, even though BTS had adequate budget to support the higher number. BTS must be able to develop long-range plans for both its expenditure levels and the number, types, and caliber of its technical staff.

Another way in which the department can support BTS's professional independence concerns press releases. The practice varies widely across cabinet departments as to whether the department, a component of the department, or the statistical agency is featured in a press release about the agency's data (e.g., the statistical agency is featured in the press releases of the Energy Information Administration). Because BTS needs to become established as a strong, credible agency that assumes responsibility for the data it produces, we urge the department to list BTS on the masthead of press releases about BTS's data, in contrast to the current practice, in which BTS's name appears only in the text. (BTS press releases should also include information about the quality of the data being released.) Further, when BTS begins to develop regularly published indicators of the transportation system, it will be important to establish predetermined schedules of public release in order to prevent the manipulation or the appearance of manipulation of release dates for political or policy purposes.

Yet another way in which the department, the administration, and the Congress can help ensure the professional independence of BTS and, more generally, its ability to evolve into an effective statistical agency is to act expeditiously in the matter of appointing (or reappointing) a director for the agency at the end of each 4-year term. It is detrimental to an agency's morale and to its ability to move forward with an agenda to have to endure a period in which there is no designated director. Inevitably, plans are put on hold and momentum is lost, which can be particularly damaging for a new agency that is trying to build its staff and reputation. (In May 1997, the U.S. Senate confirmed the reappointment of the first BTS director, T.R. Lakshmanan, to a second 4-year term.)

Similarly, it is helpful for the evolution of a statistical agency to have a mea-

sure of stability from a statute that authorizes the agency on a permanent or long-term basis. (At present, all of the major statistical agencies are permanently authorized, with the exception of the National Center for Health Statistics, which must be reauthorized every 5 to 6 years, and BTS itself, which was initially authorized for a 6-year period in the 1991 ISTEA.) With the knowledge that its existence is ensured over a long period, an agency is in a better position to work toward such long-range goals as building a strong statistical staff, developing a culture of commitment to data quality, and constructing high-quality, relevant statistical indicators.

BUILDING TRUST

To maintain credibility and be able to obtain the cooperation of respondents to surveys and other data collection programs, a statistical agency must have a relationship of trust with data providers. Key to maintaining this relationship are procedures and practices that provide a firm guarantee of confidentiality of responses—specifically, that no data will be released that could identify an individual person or business. Other practices, such as informing respondents of the anticipated uses of the information, designing data collection so as to minimize reporting burden, seeking opportunities to assist data providers to make use of the data they have themselves provided, and obtaining input from respondents (and others) in planning the scope of data collection and data products, are also helpful in building trust (see National Research Council, 1992b, and Appendix C).

We focus on the issue of maintaining the confidentiality of responses from individuals and businesses. The critical nature of confidentiality protection for the mission of a statistical agency and the implications for the kinds of data programs the agency should operate is particularly important to address in a department like USDOT that has many data systems that serve administrative and regulatory functions in which identification of reporting units is an operational necessity.

Confidentiality Protection

The release of data that identify individual reporting units is incompatible with the mission of a statistical agency.² A statistical agency provides data, not for administrative, regulatory, or enforcement purposes, which would require the identification of individual respondents, but for description, evaluation, and analysis on the basis of patterns and trends from groups of respondents (National Re-

²The exception is when the reporting units, such as state and local governments, are public entities, in which case statistical agencies commonly report data for individual units (e.g., highway expenditures of each state) as well as for groups (e.g., expenditures by budget category for cities grouped by population size class). However, the emphasis in such reporting is always on data that are useful for policy planning, evaluation, and research, not for investigation or auditing.

search Council, 1992b:2). Statistics by definition pertain to groups and not to individual units.

Also, statistical agencies must generally rely on the voluntary cooperation of respondents to obtain high-quality data. Such cooperation may be impaired if respondents believe that the data they provide will be released in a way that identifies them to others. Although the research literature in this area is scant, a few studies have found that response rates to surveys, particularly to such sensitive items as income, are somewhat lower when there is not a strong assurance of confidentiality. Also, surveys of taxpayers find that, although many people are willing to have their tax records shared with other agencies for specific purposes, large minorities of taxpayers are opposed to any type of data sharing (see National Research Council, 1993:80-85). Furthermore, statistical agencies that conduct establishment surveys frequently find that businesses are reluctant to respond because of concerns that sensitive information will be identifiable and hence available to competitors.

Protection of confidentiality does not require that data must always be released in aggregate form. Many statistical agencies release microdata files as well as aggregate statistics. Microdata files are very useful to researchers, enabling them to produce statistics and analyses to suit their particular purposes. However, statistical microdata files, although they provide data for individual reporting units, do so in a manner that guards against disclosure of the identity of a unit—for example, such files carry no name or address, have limited geographic identification, and alter sensitive variables that might otherwise possibly permit disclosure (e.g., reported income above a specified amount may be assigned to a single broad category). Also, microdata files are samples of reporting units (either from a sample survey or a sample of census records), which further protects confidentiality.³

The 1991 ISTEA recognized the importance of confidentiality protection for data provided by BTS. It contains an explicit prohibition on certain disclosures (see Appendix A):

Information compiled by the Bureau shall not be disclosed publicly in a manner that would reveal the personal identity of any individual . . . or to reveal trade secrets or allow commercial or financial information provided by any person to be identified with such person.

We recommend that the reauthorization of BTS include an explicit provision that it not release information that would identify individuals or businesses in its surveys and other data collection programs (see recommendation 10 at the end of

³When a statistical agency believes that it is not possible to release microdata files with sufficient data for analysis in a form that protects against disclosure, other arrangements may be made for research use of the microdata. For example, the Census Bureau has recently established two secure Research Data Centers (one at its Boston regional office and the other at Carnegie Mellon University) for access to its longitudinal research database on manufacturing establishments. Researchers must come to the center, be sworn as special Census Bureau agents, and use the data on site.

the chapter). Furthermore, BTS should make clear its commitment to protecting confidentiality in its publications and in information that accompanies its CD-ROMs and other data products.

Identifiable Data from Regulatory Systems

Many data systems in USDOT are operated for administrative, regulatory, and enforcement purposes in which it is necessary to identify individual reporting units. Such data may not be publicly available on a routine basis, but the data are potentially available in identifiable form through such means as documentation for regulatory hearings and judicial proceedings. Moreover, such data provide the basis for enforcement actions against particular reporting units. As an example, the Federal Aviation Administration maintains large operational databases that provide the basis for grounding or requiring changes in operations of particular airlines that violate safety standards and procedures.

A statistical agency cannot operate data programs for which there can be no guarantee of confidentiality protection and that may be used to sanction individuals or businesses or take other actions that affect them directly. It would no longer be a statistical agency and could not maintain its credibility with respondents or its reputation as a nonpartisan source of objective data for policy making, planning, and research. However, there are many ways in which a statistical agency can contribute to the administrative and regulatory data programs in a department without becoming directly involved in their operation.

A statistical agency can provide technical advice on data collection and processing, for example, on the design of reporting forms and instruments and efficient methods of data processing.⁴ It can also provide technical assistance in the analysis of the data to identify patterns that could be helpful for consistent regulation and enforcement. Finally, a statistical agency can serve as the compiler and disseminator of statistical reports and data products from the administrative or regulatory data. This function is particularly useful when there is no requirement that individually identifiable data be released on a routine basis. When there is such release, users can develop their own aggregate statistics; however, it may still be useful for a statistical agency to produce aggregate reports of key time series or other broadly relevant statistics. (In Box 5-1, we illustrate ways in which statistical agencies contribute to the *statistical* use of administrative and regulatory data through an example from another area—income tax returns.)

We believe that, as BTS develops its statistical staff and gains stature in the department, it can be increasingly helpful to the other modal administrations in USDOT by providing technical assistance, not only for statistical data programs (e.g., surveys), but also for regulatory and administrative data. However, BTS

⁴For example, in the area of pension regulation, the Bureau of Labor Statistics has advised the Pension and Welfare Benefits Administration on efficient methods for processing the information that private employers are required to provide about enrollment and funding of pension plans.

BOX 5-1**Statistical Uses of Individual Income Tax Return Data***Internal Revenue Service (IRS)*

Processes individual and corporate income tax return data to calculate taxes and refunds, monitor compliance, and take action against fraud and delinquency. Tax return data are not routinely made available for individual tax filing units (whether people or businesses), but they are potentially available to enforcement agencies (e.g., the Justice Department) and for court proceedings. Includes a statistical unit (see below).

Statistics of Income (SOI) program in IRS

Statistical enclave within IRS that prepares statistical microdata files of samples of individual tax returns and publications of aggregate individual and corporate income tax data for policy analysis and research use. SOI provides a detailed microdata file of a sample of individual tax returns to the Office of Tax Analysis in the Treasury Department and the Joint Committee on Taxation for use in simulating the likely effects on government revenues of proposed changes to tax laws. (This file lacks identifying information, such as name and address, but contains complete tax filing information for each sample tax return.) SOI prepares a public-use microdata file that is elaborately processed to protect confidentiality (e.g., tax returns for high-income filing units are subsampled, state and local income tax deductions are blurred). SOI supports statistical methods research in such areas as the development of longitudinal samples and of samples that permit early publication of estimates when not all returns have been processed. SOI has no involvement with tax administration or enforcement.

Census Bureau

Uses public-use SOI microdata file for estimating after-tax income of survey respondents. Obtains limited confidential data from SOI on individual income tax filing units (e.g., type of filing unit, number of exemptions) to use in estimating migration rates between local areas for developing small-area population estimates between censuses. Also obtains limited confidential income information (e.g., wages and salaries) for evaluating the quality of reporting in household surveys. Obtains address information from corporate income tax returns with which to develop a list of the universe of business establishments (the Standard Statistical Establishment List) for use in business censuses and surveys. Also obtains selected information from returns for small businesses to reduce their reporting requirements in surveys. No confidential IRS data are publicly released in any form by the Census Bureau.

Bureau of Economic Analysis

Uses aggregate IRS data as input to the National Income and Product Accounts.

should not operate data programs for which there can be no guarantee of confidentiality protection—which raises a problem, because two such programs were recently assigned to BTS. These programs—those of the Office of Airline Information and the Motor Carrier Statistics Program—were originally regulatory in nature. With financial deregulation of transportation industries, the data, for the most part, no longer serve regulatory purposes, but the programs continue to provide for routine release of information for individual carriers. We briefly review these programs and the implications for BTS in the next section

BTS Data Programs that Release Identifiable Data

Office of Airline Information

BTS currently houses the Office of Airline Information (OAI), which operates data programs that were developed by the Civil Aeronautics Board when that agency regulated the airline industry with respect to entry, pricing, and related matters. The airlines were deregulated in 1978, but the data programs continued under provisions in the *Code of Federal Regulations* that specify reporting requirements for the airlines and the availability of data series. Many of the OAI data series are publicly available not only as aggregated statistics, but also in a form that identifies individual airlines. Major data sets and their availability include the following:

- *Domestic operations by segment of service for large and small certificated U.S. air carriers* Airlines provide monthly information on passengers (by class), freight, and mail that boarded and deboarded flights on each segment of travel (e.g., New York-Chicago) for each type of aircraft (e.g., Boeing 727). These data, which identify individual airlines, are available on an unrestricted basis to all users.
- *International operations by segment of service for U.S. and foreign carriers* The international operations data are similar to the domestic operations data, but they are restricted (i.e., available in identifiable form only upon application and by agreeing not to share the data with others) for a specified time period after collection. The restriction period is currently 6 months (prior to March 1997, it was 3 years), after which time the data are available in identifiable form to all users.
- *Financial data on large and small certificated U.S. air carriers* Airlines report quarterly data on profit and loss, balance sheets, and operating expenses. These data are similar to what public companies are required to report to the Securities and Exchange Commission (SEC), and like reports to the SEC, they are available in identifiable form on an unrestricted basis.⁵

⁵Commuter air carriers provide more limited flight operation and financial data on a quarterly basis. For some small carriers, the financial data are available in identifiable form only on a restricted basis (i.e., only upon application and by agreeing not to share the data with others).

- *Origin and destination data from a 10 percent sample of tickets* The ticket information (collected quarterly from the airlines) includes origin and destination for each stage of an air trip, airline, class, and ticket price. The full data set is available only on a restricted basis as defined previously (with no time limit); the data set without prices is available on an unrestricted basis.

The OAI data are used for many purposes: by the Office of the Secretary to award international routes to domestic airlines (the one area in which the government retains a regulatory role); by the Transportation and Justice Departments to monitor domestic airline competitive status and behavior; by the Federal Aviation Administration to allocate such resources as funding for airport expansion and number of inspectors at each airport; by the Defense Department to determine the health of the airlines; and by the General Accounting Office to conduct studies of the airline industry requested by the Congress. The data are also heavily used by the airlines themselves to identify targets of opportunity for expansion, to readjust routes and schedules, and for similar purposes.

Motor Carrier Statistics Program

Recently, BTS was assigned yet another data program that provides individually identifiable information: the Motor Carrier Statistics Program, which obtains financial and operating information from large interstate freight and passenger motor carriers. These data, which were originally developed by the now-defunct Interstate Commerce Commission, are currently available for individual carriers. (Data for individual bus lines are provided on the BTS web site.)

The legislation that transferred the Motor Carrier Statistics Program to USDOT required the department to evaluate and redesign the program to take account of data users' needs (particularly for data that are relevant to safety concerns), the need to preserve confidential business information, and the need to reduce reporting burden. BTS recently issued a notice (*Federal Register*, December 9, 1996:64849-64851) of the process it intends to follow to evaluate and redesign the Motor Carrier Statistics Program.

Implications for BTS

Given that a statistical agency is not an administrative, regulatory, or enforcement agency and that central to its mission is a commitment not to release individually identifiable data, we are concerned about the placement of the Office of Airline Information and the Motor Carrier Statistics Program within BTS. The continued operation of data programs within BTS that require release of data in identifiable form poses a risk to the evolution of BTS as a statistical agency that can credibly pledge confidentiality to survey respondents. We believe this risk is present even when the reporting units themselves generally support full disclo-

sure and the data are not used for enforcement (as is true of the OAI data programs).

We recommend that BTS evaluate the OAI and Motor Carrier Statistics programs from the perspective of their compatibility with its mission as a statistical agency (see recommendation 11 at the end of the chapter). The review should establish whether it is necessary to the continued effective use of the data that they be released in individually identifiable form. From the many public- and private-sector uses of the data provided by OAI for individual airlines, there are likely strong arguments to continue to make them available on that basis. In the case of the Motor Carrier Statistics program, it may be that the data can be useful without such identification. If a determination is made that the data in one or both of these programs need to be made available in identifiable form in order to serve important public purposes, then BTS should recommend to the secretary of transportation that the programs be transferred elsewhere in USDOT for operation. BTS should continue to be as helpful as possible in improving the quality and usefulness of the data. It should also incorporate statistics derived from the data in its electronic and printed products and use the data as appropriate to develop indicators, but it should not operate the programs so long as there are provisions to release the data for individual reporting units.

ATTAINING LEADERSHIP

As the statistical agency in USDOT with a broad mandate to improve transportation data, BTS should have leadership responsibilities in such areas as developing department-wide data quality standards and coordinating the collection of transportation data with agencies inside and outside USDOT. BTS will need to develop its staff capabilities to carry out these responsibilities and to be able to assume leadership in fact and not just in name. It will also need to focus its attention on data quality and relevance more than on quantity of data and services and to set priorities so as to make the most of its available resources.

Both formal and informal means of support will be needed for BTS to develop an appropriate leadership role in the department. Thus, we recommended (in Chapter 3) that the reauthorization of BTS strengthen its mandate to develop binding data quality standards for USDOT. We also recommended (in Chapter 4) that the department assign BTS the responsibility to develop a statistical budget that can help identify data priorities and assist the secretary in making budget decisions about USDOT data programs.

Even with strengthened authority, BTS is not likely to have an easy time in developing stature in USDOT in such areas as standards setting and coordination of data collection. Asserting leadership will be particularly difficult when it appears that the mission or budget of one or more modal administrations may be affected—for example, if there is a proposal to integrate previously separate data collection programs into what could be a more cost-effective combined program.

BTS will need strong ongoing support from the Office of the Secretary, particularly while it is still building its staff capabilities and developing excellence in its own operations. In turn, BTS must achieve high standards of performance so that it can gain the reputation necessary for a leadership role. Finally, BTS and the department should seek opportunities to develop such programs as staff exchanges between BTS and statistical units in the other modal administrations. These kinds of programs can foster good working relationships and promote cooperative efforts to improve the quality and relevance of transportation data for the benefit of the entire community of transportation data users.

RECOMMENDATIONS

Ensuring Independence

(9) The reauthorization of BTS should continue the provisions of current law that the director of BTS be a presidential appointee with a fixed term of 4 years, who reports directly to the secretary of transportation and is a qualified professional with relevant training and experience. The reauthorization should underscore the professional independence of BTS by statutorily confirming its authority to release statistical information without prior clearance by political officials outside BTS.

Protecting Confidentiality

(10) The reauthorization of BTS should continue to require that it not release data that could identify individual or business respondents.

(11) BTS should review the Office of Airline Information and Motor Carrier Statistics programs, which provide for the release of individually identifiable data, for their compatibility with the BTS mission as a statistical agency that is committed to confidentiality protection. To the extent that the data from these programs need to be available in identifiable form to serve important policy purposes, BTS should recommend to the secretary that the programs be lodged elsewhere in USDOT.